

IN THE CLAIMS:

Please cancel claims 1-8, 10-12, 15, 17-20, 22-30, and 33.

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (previously presented) A buffer structure for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals; and

an address generator coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections;

wherein the buffer is partitioned and assigned prior to the start of each shortest time interval.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (previously presented) A buffer structure for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals; and

an address generator coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections;

wherein the plurality of channels include a first group of one or more channels and a second group of one or more channels, wherein one or more sections assigned to the one or more channels in the first group are defined starting from a first initial location and continuing along a first direction of the buffer, and wherein one or more sections assigned to the one or more channels in the second group are defined starting from a second initial location and continuing along a second direction of the buffer.

14. (previously presented) A buffer structure for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals; and

an address generator coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections;

wherein the plurality of channels include a first group of one or more channels and a second group of one or more channels, wherein one or more sections assigned to the one or more channels in the first group are defined starting from a first initial location and continuing along a first direction of the buffer, and wherein one or more

sections assigned to the one or more channels in the second group are defined starting from a second initial location and continuing along a second direction of the buffer;

wherein the first and second initial locations are selected as a common location, and wherein the first and second directions are opposite directions.

15. (Canceled)

16. (previously presented) A buffer structure for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the buffer structure comprising:

a buffer partitioned into a plurality of sections, one section for each channel, wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals; and

an address generator coupled to the buffer and operative to provide addresses for writing symbols to the assigned sections;

wherein the address generator is operative to maintain a write pointer for each assigned section;

wherein the address generator is further operative to maintain a start location for each assigned section.

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (previously presented) A receiver unit operative to process symbols received via a plurality of channels in a communication system, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the receiver unit comprising:

a channel processor operative to process samples received for the plurality of channels to provide symbols;

a buffer coupled to the channel processor and operative to store the symbols from the channel processor, wherein the buffer is partitioned into a plurality of sections, one section for each channel, and wherein the plurality of sections are assigned to the plurality of channels based on the associated time intervals; and

a data processor coupled to the buffer and operative to retrieve symbols for a particular traffic from an assigned section of the buffer and to process the retrieved symbols;

wherein the plurality of channels includes a first group of one or more channels and a second group of one or more channels, wherein one or more sections assigned to the one or more channels in the first group are defined starting from a first initial location and continuing along a first direction of the buffer, and wherein one or more sections assigned to the one or more channels in the second group are defined starting from a second initial location and continuing along a second direction of the buffer.

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (previously presented) A method for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the method comprising:

- identifying the plurality of channels to be received and processed;
- determining a time interval associated with each channel;
- assigning a plurality of sections of a buffer to the plurality of channels in accordance with the associated time intervals; and
- storing symbols received from the plurality of channels to the plurality of assigned sections;

wherein the assigning includes

- ranking the plurality of channels according to the associated time intervals,
- selecting a channel associated with a longest time interval and not yet assigned a section of the buffer,
- allocating a next available section of the buffer to the selected channel,

wherein the next available section is defined from a start location or an end of a preceding allocated section, and

- repeating the selecting and allocating for the plurality of channels.

32. (previously presented) A method for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the method comprising:

- identifying the plurality of channels to be received and processed;
- determining a time interval associated with each channel;
- assigning a plurality of sections of a buffer to the plurality of channels in accordance with the associated time intervals; and
- storing symbols received from the plurality of channels to the plurality of assigned sections;

wherein the assigning includes

- ranking the plurality of channels according to the associated time intervals,

selecting a channel associated with a longest time interval and not yet assigned a section of the buffer,

allocating a next available section of the buffer to the selected channel, wherein the next available section is defined from a start location or an end of a preceding allocated section, and

repeating the selecting and allocating for the plurality of channels;

wherein the assigning further includes

determining the size of a traffic to be received on the selected channel, and

wherein the next available section allocated to the selected channel is defined based on the determined traffic size.

33. (Canceled)

34. (previously presented) A method for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the method comprising:

identifying the plurality of channels to be received and processed;

determining a time interval associated with each channel;

assigning a plurality of sections of a buffer to the plurality of channels in accordance with the associated time intervals; and

storing symbols received from the plurality of channels to the plurality of assigned sections;

further comprising:

grouping the plurality of channels into a first group of one or more channels and a second group of one or more channels, and

wherein the assigning includes

first assigning one or more sections defined along a first direction of the buffer to the one or more channels in the first group in accordance with the associated time intervals, and

second assigning one or more sections defined along a second direction of the buffer to the one or more channels in the second group in accordance with the associated time intervals.

35. (previously presented) A method for storing symbols received via a plurality of channels, wherein each channel is associated with a particular time interval over which the received symbols are subsequently processed, the method comprising:

- identifying the plurality of channels to be received and processed;

- determining a time interval associated with each channel;

- assigning a plurality of sections of a buffer to the plurality of channels in accordance with the associated time intervals; and

- storing symbols received from the plurality of channels to the plurality of assigned sections;

- further comprising:

- grouping the plurality of channels into a first group of one or more channels and a second group of one or more channels, and

- wherein the assigning includes

- first assigning one or more sections defined along a first direction of the buffer to the one or more channels in the first group in accordance with the associated time intervals, and

- second assigning one or more sections defined along a second direction of the buffer to the one or more channels in the second group in accordance with the associated time intervals;

- wherein the first and second groups of one or more channels are associated with first second coded composite transport channels (CCTrCHs), respectively, defined by W-CDMA standard.